

Title (en)
PHOSPHOR WHEEL

Title (de)
PHOSPHORRAD

Title (fr)
ROUE À LUMINOPHORE

Publication
EP 4286743 A1 20231206 (EN)

Application
EP 21923220 A 20211221

Priority
• JP 2021010586 A 20210126
• JP 2021047247 W 20211221

Abstract (en)
A phosphor wheel (1) includes: a substrate (11) including a first principal surface and a second principal surface; a phosphor layer (12) provided on the first principal surface; and a heat dissipating member (30B) disposed facing the first principal surface or the second principal surface and rotated along with the substrate (11), the heat dissipating member (30B) being a plate member. The heat dissipating member (30B) includes: a projecting portion (34B) provided at a central portion of the heat dissipating member (30B) to project toward one surface, the projecting portion (34B) including (i) a contact surface that contacts the one surface and (ii) the contact surface which serves as a bottom surface; and fins (31) provided by cutting and raising regions (32) in a peripheral region of the heat dissipating member (30B) excluding the central portion. The projecting portion (34B) includes, in a peripheral wall (342), through-holes (35B) provided for ventilation. The projecting portion (34B) contacts the substrate (11) via the contact surface to secure a certain distance between the substrate (11) and the heat dissipating member (30B) and conduct heat in the substrate (11) to the peripheral region of the heat dissipating member (30B).

IPC 8 full level
F21V 29/502 (2015.01); **F21V 9/40** (2018.01); **F21V 29/74** (2015.01); **F21V 29/83** (2015.01)

CPC (source: EP US)
F21V 29/502 (2013.01 - US); **F21V 29/74** (2015.01 - EP); **G02B 26/008** (2013.01 - US); **G03B 21/16** (2013.01 - EP); **G03B 21/204** (2013.01 - EP); **F21V 29/502** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4286743 A1 20231206; **EP 4286743 A4 20240717**; CN 116829871 A 20230929; JP 7457974 B2 20240329; JP WO2022163217 A1 20220804; TW 202229768 A 20220801; TW I784871 B 20221121; US 12013526 B2 20240618; US 2024053599 A1 20240215; WO 2022163217 A1 20220804

DOCDB simple family (application)
EP 21923220 A 20211221; CN 202180091352 A 20211221; JP 2021047247 W 20211221; JP 2022578152 A 20211221; TW 111102298 A 20220120; US 202118259975 A 20211221